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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 21**

#### **Proposed Additional Airworthiness Design Standards: Advanced Avionics Under the Special Class (JAR-VLA) Regulations; Aquila Aviation by Excellence GmbH, Model AT01-100.**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Request for comments.

**SUMMARY:** This document announces the issuance of the design criteria for the inclusion of advance avionics with intergrated electronic displays for the Aquila Aviation by Excellence GmbH AT01-100. These additional provisions are expansions of the existing JAR-VLA (Joint Aviation Requirements-Very Light Aircraft) and CS-VLA regulations as the current regulations do not adequetely address these types of systems. The current regulations only address traditional federated gauges. The European Aviation Safety Agency (EASA) has not expanded the VLA regulations for these types of installation on these types of airplanes through EASA special conditions or new regulations. These Federal Aviation Administration (FAA) design criteria are being proposed to help initiate standards for this type of airplane without being overburdensome and to encourage EASA to follow suit.

**DATES:** Comments must be received on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** Send all comments to the Federal Aviation Administration (FAA), Standards Office, Small Airplane Directorate (ACE-112), Aircraft Certification Service, 901 Locust Street, Room 301, Kansas City, MO 64106.

**FOR FURTHER INFORMATION CONTACT:** Mr. Doug Rudolph, Aerospace Engineer, Standards Office (ACE-112), Small Airplane Directorate, Aircraft Certification Service, FAA; telephone number (816) 329-4059, fax number (816) 329-4090, email at [doug.rudolph@faa.gov](mailto:doug.rudolph@faa.gov).

**SUPPLEMENTARY INFORMATION:** Any person may obtain a copy of this information by contacting the person named above under **FOR FURTHER INFORMATION CONTACT**.

### **Background**

The original certification of the aircraft was done under the provisions of 14 CFR 21.29, as a § 21.17(b), special class aircraft, JAR-VLA, using the requirements of JAR-VLA Amendment VLA/92/01 as developed by the Joint Aviation Authority, and under Title 14 of the Code of Federal Regulations and two additional design criteria issued on September 2, 2003 (68 FR 56809).

The regulation applicable to the Amended Type Certificate (TC) approval is § 21.17(b). This section describes the regulatory basis for the approval of JAR-VLA and CS-VLA aircraft as a special class. Policy on this subject includes AC 23-11B and AC 21.17-3.

FAA policy expressed in AC 23-11B and AC 21.17-3 limits JAR-VLA and CS-VLA aircraft approved under § 21.17(b), to Day-VFR operations. Additionally, the FAA also published design criteria to allow expansion of the Aquila AT01-100 airplane

to include Night-VFR as shown in NPRM 75 FR 32576. In conjunction with the expansion to Night-VFR operations integrated avionic displays are to be installed on the Aquila AT01-100 airplane.

EASA allowed the applicant to comply with CS-23 regulations for the integrated avionic displays installed on the Aquila AT01-100 airplane and made them part of the EASA certification basis, but did not publish these additional requirements as Special Conditions as they did for the Night-VFR expansion. The FAA's system does not allow this type of additional requirements, such as 14 CFR part 23 regulations, to be added to a special class, § 21.17(b) airplane without being publically noticed either through design criteria or expansion of the existing AC 23-11B. This is the reason for this design criteria notification.

The FAA has concluded that it is acceptable to allow advanced integrated avionic systems for certification on the Aquila Model AT01-100 under the special class amended TC project AT00651CE-A, provided the applicant complies with the below listed design criteria based on existing part 23 regulations at the described amendment levels.

Revisions to AC 23-11B and AC 21.17-3 will be made to address future airplanes that wish to allow these installations.

To satisfy the additional required design criteria for the Special Class (JAR-VLA) Regulations of § 21.17(b), Aquila Aviation by Excellence GmbH has agreed with the FAA to use the 14 CFR part 23 regulations for their Model AT01-100, as shown on the FAA G-1 Issue Paper. The applicable criteria for the installation of advanced avionic displays on the Aquila AT01-100 are as follows:

14 CFR 23.867 at amendment 23-49, "Electrical bonding and protection against lightning and static electricity"

14 CFR 23.1307 at amendment 23-49, “Miscellaneous Equipment”  
14 CFR 23.1311 at amendment 23-62, “Electronic Display Instrument Systems”  
14 CFR 23.1321 at amendment 23-49, “Arrangement and visibility”  
14 CFR 23.1359 at amendment 23-49, “Electrical System Fire Protection”.

In addition to the above five regulations that will be used for design criteria, the FAA has also developed a methods of compliance (MOC) issue paper for VLA-1309 for this type of installation.

### **Comments Invited**

We invite interested parties to submit comments on the proposed airworthiness standards to the address specified above. Commenters must identify the Aquila Model AT01-100 and submit comments to the address specified above. The FAA will consider all communications received on or before the closing date before issuing the final acceptance. The proposed airworthiness design standards and comments received may be inspected at the FAA, Small Airplane Directorate, Aircraft Certification Service, Standards Office (ACE-110), 901 Locust Street, Room 301, Kansas City, MO 64106, between the hours of 7:30 a.m. and 4:00 p.m. weekdays, except Federal holidays.

Issued in Kansas City, Missouri on August 5, 2013.

Earl Lawrence,  
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Aircraft Certification Service.

**[4910-13]**

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